UNCLASSIFIED

Pacific Rim Innovation Symposium

Breakout Groups

Participant Analysis and Recommendations

UNCLASSIFIED

Info Dissemination

Analysis of the Subject / Highlights of Discussion

- Navy moving to single XXX system/networks (i.e. CANES)
- Redundancy affects battle effectiveness
- Can't be tactically blind/down
- Taking away legacy comm systems on newer platforms
- Training challenges
- Replacing parts can be challenging, affects time, readiness, fuel, costs

Recommended Solutions, Fixes, or Take-Aways

- Have server replacement parts/components on supply ships or reinstitute MAMS policy on all ships
- Utilize AVN AIMD supply model
- Implement Tactical Cloud On Demand data replication
  - As long as one ship in a CSG is up, you have capability
  - Need to optimize bandwidth, data compression
- Other alternatives: Optical system, airborne relay

Information Dissemination

- Other areas of discussion included:
  - Finding new ways to compress data
  - Use of biologics to transmit data
  - Finding time, space, and balance to train sailors on both new and legacy systems
  - Creating a culture of OPSEC (no cell phones off the fantail)

White Shipping

I. Visual Compromise: How to Avoid

1. Innovation in Intelligence Preparation of the Sea Space

A. Satellite
B. Existing AIS / routes of merchant shipping
C. Thermal
D. Human Intelligence

2. Obscuration

A. Smoke screen
B. Leverage Weather / atmospheric conditions
C. Night
D. Use of terrain / shipping as cover

White Shipping

II. If Compromised, then…

1. Disrupt / Deny Communications

A. **Electro-Magnetic Pulse, Directed**

B. **Using a UUV / USV / UAV delivery**

2. Misinformation

A. **Intercept, Repeat, Alter Transmissions**

B. **Psyops / Media misinformation campaigns**

C. **Confusion via friendly white shipping via signals**

3. Physical Control of Vessel, via USV / UUV

A. **Foul rudder**

B. **Redirect ship**

C. **Slow ship**

White Shipping

III. DESIGN

1. Near Term

A. Disguise – physically changing the profile of the ship
   i. Deceptive lighting enhancements
   ii. False masts
   iii. Shading (color, etc)

2. Far Term

A. Angled mirror surfaces. “All you’d see is more ocean and sky” THE GREAT CHROME FLEET
B. Lower profile in design
C. Concealment via holograph
D. Use of USVs / buoys for deception e.g. false radar hits and holographic ships, decoys

FRTP & Experimentation

Analysis of the Subject / Highlights of Discussion

- Time constrained – Little capacity for more than minimum requirements to be met.
- Inspection driven process – Units are always “cramming” for the next event vice maintaining a steady-state proficiency.

Recommended Solutions, Fixes, or Take Aways

- Workload analysis – Prioritize and eliminate selected requirements to enable more focus on the highest priorities, e.g., warfighting.
- Tailor workups and evaluations for specific AORs and the most probable missions within that AOR.

Momentum in Denied Areas

Analysis of the Subject / Highlights of Discussion

- Assuming capable opponent who can detect and track over large area.
  - How to remain unlocated.

Recommended Solutions, Fixes, or Take-Aways

- Deception
  - Multiple cheap unmanned vehicles as decoys
  - EMCON/Lighting
  - Placement of decoy systems on white shipping
  - Decoy systems on opponents commercial vessels- fishing etc..
  - Floating objects as dark targets

Momentum in Denied Areas

Analysis of the Subject / Highlights of Discussion

- Assuming a capable opponent with ability to cover/track over a large area.
  - How do we enable ability to operate when required.

Recommended Solutions, Fixes, or Take Aways

- Near Term
  - Long-term. Passive sensor packages on MERSHIP/ ACFT normally transiting areas of interest.
  - Short term/reactive. Sensor package on AGI configured as normal littoral traffic transported into area by mother ship.
  - Real time. Network existing MERSHIP sensors,

Momentum in Denied Areas

Analysis of the Subject / Highlights of Discussion

- Assuming a situation where US is at a numeric disadvantage.

Recommended Solutions, Fixes, or Take-Aways

- Force multipliers
  - Leverage cooperative nations capabilities.
  - Numerous unmanned vehicles capable of autonomous operations to
    - Detect and report
    - Decoy
    - Tag high interest vessels
  - Distributed sensors

Momentum in Denied Areas

Analysis of the Subject / Highlights of Discussion

- Distance will provide logistic issues for ammo resupply.
- GPS/ Internet/Satellite

Recommended Solutions, Fixes, or Take-Aways

- Non-kinetic weapons
  - Directed energy
  - Jammers/soft kill directed at missile acquisition/seekers
- Training
  - Lost capabilities need to be revisited
  - Timing source independent of GPS